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MONTANA FOREST TREE FUNGI—I. POLYPORACEAE

JAMES R. WEIR

(WITH PLATE 6)

Since September, 1911, the writer has been collecting the forest tree fungi of Montana with the view of issuing a list covering all species of importance found in the state. Each year's collecting has resulted in finding such a large number of species that it seems advisable to issue a first report confined to the Polyporaceae.

The forest tree fungi of Montana are not very well known. The earlier collectors paid little attention to this particular class of plants. A few of the most important publications dealing with Montana fungi may be enumerated. A list of fungi published by Seymour¹ contains 52 species from Montana. Of these 8 were fungi of forest trees. Kelsey² collecting in the vicinity of Helena published a list of 74 species, of which about 14 are found on leaves or twigs of forest trees. The same author³ published notes on nine species of Erysipheae of which 3 are on forest trees. Anderson⁴ published a series of papers on the fungi of Montana

¹ List of Fungi Collected in 1884 along the Northern Pacific Railroad Proc. Boston Soc. Nat. Hist. 24: 182-191. 1889.

² Notes on the Fungi of Helena, Mont. Jour. Mycol. 5: 80-82. 1899.

³ Study of Montana Erysipheae. Bot. Gaz. 13: 285-288. 1889.

⁴ Brief Notes on a Few Common Fungi of Montana. Jour. Mycol. 5: 30-32. 1889.

Supplementary Notes. Jour. Mycol. 5: 82-84. 1889.

A Preliminary List of the Erysipheae of Montana. Jour. Mycol. 5: 188-194. 1889.

A New Fomes from Northern Montana. Bot. Gaz. 16: 114. 1891.

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in which 80 species are mentioned, of which number about 13 are fungi of forest trees. Short papers by Ellis and Anderson,⁵ Ellis and Everhart,⁶ and Ellis and Galloway⁷ mention 25 species from Montana, of which about 3 are on stems of shrubs or trees. Griffiths⁸ in a series of publications on western fungi in which a number of species are either listed or described from Montana mentions 3 species (Erysiphaceae) on forest trees. Jones⁹ enumerates over 100 species of fungi from the Flathead Lake region. Of this number, 17 are important forest tree fungi. Mention of many species may be found in the periodical literature treating certain groups and in the exsiccati. Century 44 (Montana edition) of Fungi Columbiani contains 15 species found on forest trees.

The present list contains a fairly large number of species, but it is not supposed that all the polypores of the state are yet collected. Members of the genus *Poria* and of the genus *Merulius* especially have been collected in abundance but only the species of which the identity is reasonably certain are listed at this time. Owing to the wide extension of the State of Montana to the east and west of the Continental Divide, its fungous flora embraces many species of the central as well as of the Pacific Coast states. The heavily wooded section in the northwestern part has practically the same fungous flora as British Columbia. In the plains region and dry mountain areas of the southern and eastern parts of the state, one may expect to find many of the species of the states to the south.

⁵ New Species of Montana Fungi. Bot. Gaz. 16: 45-49, pl. 7; 85-86. pl. 10. 1891.

⁶ Notes on a Species of *Coprinus* from Montana. The Microscope 10: 129-131. pl. 4. 1890.

⁷ New Western Fungi. Jour. Mycol. 5: 65-68. 1889.

⁸ Some Northwestern Erysiphaceae. Bul. Torrey Bot. Club 26: 138-144. 1899.

Contributions to a Better Knowledge of the Pyrenomycetes.—I. Bui. Torrey Bot. Club 26: 432-444. pl. 365, 366. 1899.

The Common Parasites of the Powdery Mildews. Bul. Torrey Bot. Club 26: 184-188. pl. 358. 1899.

The North American Sordariaceae. Mem. Torrey Bot. Club 11: 1-134, 6 fig., 19 pl. 1901.

Concerning Some West American Fungi. Bul. Torrey Bot. Club 29: 290-301, 10 fig., 1902; 31: 83-88, 17 fig., 1904; 34: 207-211. 1907.

⁹ Montana Botany Notes. Bul. Univ. of Montana No. 61, pp. 61-65. 1910.

Specimens of most of the species listed here have been carefully checked with authentic material collected by the writer in various parts of the United States and Europe. Specimens in some of the well known exsiccati in the writer's possession have been used in checking doubtful collections. Some authentic material for comparison has been generously contributed by Dr. C. H. Kauffman, Dr. H. D. House, Dr. L. H. Pennington, and Dr. J. F. Brenckle. To these gentlemen thanks are due. The authorities for the names of the plants are with a few exceptions those responsible for the specific names only. The writer desires to express his obligations to Mr. C. G. Lloyd for verifying and determining some of the more difficult species in this list. All specimens named in this list were collected and named by the writer unless otherwise indicated and are preserved in the Laboratory of Forest Pathology, at Missoula, Montana.

POLYPORACEAE

MERULIUS

Merulius aureus Fr. on *Pinus monticola*; Heron, *Larix occidentalis*, Missoula.

Merulius corium (Pers.) Fr. on *Larix occidentalis*, Evaro, *Prunus demissa*, Missoula.

Merulius lacrymans Schum. on mine timbers (*Pinus contorta*), Butte, mill yard timbers of *Pseudotsuga taxifolia*, Libby. This fungus or its wild form (*Merulius silvester*) is found rarely on decaying logs in the forest.

Merulius molluscus Fr. on *Pinus contorta*, Anaconda, *Pinus monticola*, Troy.

Merulius niveus Fr. on *Alnus tenuifolia*, Missoula, *Betula occidentalis*, Evaro, *Abies grandis*, Libby.

Merulius squalidus Fr. on *Pinus monticola*, Libby, *Picea Engelmanni*, Darby.

Merulius tremellosus Schrad. on *Betula occidentalis*, Missoula, *Pinus ponderosa*, Evaro, greenhouse timbers, Missoula.

POLYPORUS

Polyporus adustus Willd. on *Populus trichocarpa* and *P. tremuloides*, Missoula. Common.

Polyporus albellus Peck on *Populus trichocarpa*, Darby, *P. tremuloides*, Missoula, *Betula occidentalis*, Missoula.

Polyporus amorphus Fr. on *Pinus ponderosa*, Darby, *P. contorta*, Haugan, *P. monticola*, Troy, *Picea Engelmanni*, DeBorgia, *Abies grandis*, Thompson Falls.

Polyporus alboluteus Ellis on *Picea Engelmanni*, Taft, *Larix occidentalis*, Libby, *L. Lyallii*, Hamilton, *Abies grandis*, Evaro.

Polyporus anceps Peck on *Larix occidentalis*, Evaro, *Pinus ponderosa*, Missoula.

Polyporus arcularius Batsch on *Alnus tenuifolia*, Missoula.

Polyporus aurantiacus Peck on *Pseudotsuga taxifolia*, Troy, *Abies grandis*, Darby, *Picea Engelmanni*, Sylvanite.

Polyporus benzoinus Fr. on *Tsuga heterophylla*, Taft, *Pseudotsuga taxifolia*, Darby, *Abies grandis*, Heron, *Picea Engelmanni*, Libby.

Polyporus berkeleyi Fr. on *Larix occidentalis*, Libby. It sometimes attacks the roots of living trees.

Polyporus betulinus Bull. on *Betula occidentalis*, Troy.

Polyporus borealis Fr. on *Picea Engelmanni*, Troy, *Tsuga heterophylla*, Troy, *Abies grandis*, Evaro. It is sometimes found on dead roots of living trees.

Polyporus brumalis Pers. on *Populus trichocarpa*, Darby, *Acer glabrum*, Troy.

Polyporus caesius Schrad. on *Populus trichocarpa*, Anaconda, *Salix* sp., Libby.

Polyporus cerifluus Berk. on *Populus trichocarpa*, Troy.

Polyporus chioneus Fr. on *Thuja plicata*, Darby, *Abies grandis*, DeBorgia.

Polyporus cinnabarinus Jacq. on *Betula occidentalis*, Troy, *Populus trichocarpa*, Missoula, *P. tremuloides*, Neihart. Common throughout.

Polyporus crispellus Peck on *Populus trichocarpa*, Missoula.

Polyporus crispus Pers. on *Populus tremuloides*, Libby.

Polyporus cryptopus Ellis, at base of dead *Pinus contorta*, slightly attached to the bark, Bozeman. This species is usually found on grass roots.

Polyporus dichrous Fr. on *Thuja plicata*, Troy, *Populus trichocarpa*, Missoula, *P. tremuloides*, Monarch.

Polyporus elegans Bull. on *Amelanchier alnifolia*, LoLo, *Populus tremuloides*, Neihart.

Polyporus ellisianus Murrill on *Pinus ponderosa*, Hamilton, *P. contorta*, Troy.

Polyporus floridanus Quél. on *Acer glabrum*, Evaro.

Polyporus fragilis Fr. on *Pinus monticola*, Troy.

Polyporus frondosus Fr. about roots of *Pinus ponderosa*, Missoula, *Pseudotsuga taxifolia*, Troy.

Polyporus fumosus Pers. on *Populus trichocarpa*, Missoula, *P. tremuloides*, Sioux National Forest.

Polyporus gilvus Schw. on dead stump of *Alnus trifolia*, Somers.

Polyporus glomeratus Peck on *Betula occidentalis*, Libby.

Polyporus griseus Peck on decaying trunk of *Pinus monticola*, Libby; usually found growing in the forest mould.

Polyporus leporinus Fr. on *Pinus monticola*, Libby.

Polyporus leucospongia Ck. on *Pinus contorta*, Anaconda, *Abies lasiocarpa*, Hamilton, *Larix Lyalli*, Hamilton.

Polyporus lucidus Leysser on *Pseudotsuga taxifolia*, DeBorgia.

Polyporus mollis Pers. on *Larix occidentalis*, Libby, *Abies grandis*, Evaro, *Pinus contorta*, Troy.

Polyporus osseus Kalch. on *Betula occidentalis*, Missoula.

Polyporus perennis Linn. on damp mossy ground in thick woods, Belton, Troy, and LoLo; sometimes on decaying logs.

Polyporus picipes Fr. on *Populus trichocarpa*, Missoula, *P. tremuloides*, Neihart. Common throughout.

Polyporus pubescens Fr. on *Betula occidentalis*, Darby, *Alnus tenuifolia*, Missoula, *Salix* sp., Belton. Thin forms are sometimes referred to *P. velutinus* Fr. The form of this plant known as *P. Grayii* (*P. pubescens* var. *Grayii*) is commonly associated with the type.

Polyporus radiatus Schw. on *Alnus tenuifolia*, Libby.

Polyporus rheades Pers. on *Populus tremuloides*, Libby, growing from wound in living tree.

Polyporus sartwellii Berk. on *Betula occidentalis*, Libby. This is really an abnormal form of *Polystictus hirsutus*.

Polyporus schweinitzii Fr. on *Pinus ponderosa*, at Missoula, Ashland, and Troy, *P. monticola*, Troy, *P. contorta*, Haugan, *Larix occidentalis*, Missoula and Somers, *Picea Engelmanni* at Darby, Saltese. Causes a serious root and trunk rot in living trees.

Polyporus semisupinus Berk. on *Alnus tenuifolia*, Heron.

Polyporus spumeus Sow. on *Populus trichocarpa*, Libby and Missoula. Causes a heart rot in living trees.

Polyporus stipticus Pers. on *Pinus monticola*, Sylvanite, *Pseudotsuga taxifolia*, Saltese.

Polyporus sulphureus Fr. on *Pinus ponderosa*, Libby, *Pseudotsuga taxifolia*, Darby, *Larix occidentalis*, White Fish. Fairly common. Occasionally attacks the roots of living trees.

Polyporus umbellatus Viviani. At base of *Picea Engelmanni*, Libby.

Polyporus undosus Peck on *Abies grandis*, Darby.

Polyporus volvatus Peck on *Pinus ponderosa*, Missoula, *P. contorta*, Bozeman, *Abies grandis*, Evaro, *Picea Englemanni*, Troy.

PORIA

Poria attenuata Peck on *Pinus contorta*, Sioux National Forest, *P. monticola*, Libby, *Larix occidentalis*, Thompson Falls.

Poria aurantiaca Rost. (*P. aurea* Peck) on *Pinus monticola*, Libby.

Poria callosa Fr., resupinate form of *Trametes serialis*, *Pinus ponderosa*, Florence, *P. contorta*, Libby.

Poria carbonaria B. & C. on *Pseudotsuga taxifolia*, Evaro, *Pinus contorta*, Anaconda. Apparently always on burned trunks.

Poria contigua Pers. on *Thuja plicata*, Libby.

Poria corticola Fr. on bark and wood of *Populus trichocarpa*, Missoula, *P. tremuloides*, Anaconda.

Poria fulvida Ellis on *Betula occidentalis*, Bearmouth.

Poria homaema Berk. on *Picea Engelmanni*, Evaro.

Poria laminata Murrill on *Alnus tenuifolia*, Libby. Forms extensive patches 2 to 3 feet long with a conspicuous stratose pore structure.

Poria marginella, Peck on *Picea Engelmanni*, Thompson Falls, *Pinus contorta*, Anaconda.

Poria medulla-panis (Pers.) Fr. on *Pinus monticola*, Libby, *Pseudotsuga taxifolia*, Evaro.

Poria obducens Pers. on *Picea Engelmanni*, Darby.

Poria pereffusa Murrill on *Picea Engelmanni*, Troy. This is a doubtful determination but conforms to description with the exception of the host.

Poria pulchella Schw. on *Pinus ponderosa*, Missoula, *Acer negundo*, Sioux National Forest.

Poria punctata Fr. on *Betula occidentalis*, Troy and Missoula. Common.

Poria rufa Schrad. on *Pinus monticola*, Sylvanite, *P. contorta*, Boulder. Observed frequently in wide checks of fire-killed trees.

Poria sanguinolenta Schw. on *Pinus monticola*, Libby. Occasionally found in old branch knots on living trees.

Poria semisupina Berk., resupinate form of *Polyporus semisupinus* Berk., on *Alnus tenuifolia*, Evaro, *Acer glabrum*, Libby.

Poria subacida Peck on *Picea engelmanni*, Troy, *Abies grandis*, Darby, *Larix occidentalis*, Libby.

Poria subspadicea Fr. on *Pseudotsuga taxifolia*, Troy, *Pinus ponderosa*, Haugan.

Poria undata Pers. on *Abies grandis*, Darby, *Pinus contorta*, Haugan.

Poria vaporaria Pers. on *Abies grandis*, Darby.

Poria violacea Fr. on *Pinus ponderosa*, Evaro, *Picea Engelmanni*, Libby.

Poria weirii Murrill on *Thuja plicata*, Darby, Troy, and Libby.

Poria xantha Fr. on *Pinus monticola*, Libby.

POLYSTICTUS

Polystictus abietinus Dicks. on fallen timber of all coniferous species. Sometimes found growing in wounds of living trees. Common.

Polystictus biformis Klotsch on *Populus trichocarpa*, Bearmouth, *Alnus tenuifolia*, Saltese.

Polystictus conchifer Schw. on *Ulmus Americana*, Arden.

Polystictus hirsutus Fr. on dead wood of deciduous trees and shrubs; wide range of hosts. Sometimes found on coniferous wood.

Polystictus pargamensis Fr. on *Populus trichocarpa*, Ashland, growing in wounds of living tree, on *P. trichocarpa*, Wisdom, *Salix lasiandra*, Belton. New range for this species, but the specimens are in every way typical.

Polystictus Sequoiae Copeland on *Thuja plicata*, Darby.

Polystictus versicolor Fr. on all species of hard woods throughout, occasionally on coniferous wood. The plants known as *Polystictus hirsutulus* Schw. and *P. zonatus* Fr. are also found occasionally.

FOMES

Fomes annosus Fr. on *Pinus monticola*, Trout Creek, *P. ponderosa*, Libby, *P. contorta*, Sylvanite, *Larix occidentalis*, Libby, *Populus trichocarpa*, Troy. Parasitic on the roots of living trees and continues to live after the death of the host.

Fomes applanatus Pers. The typical European form with brown soft crust on *Populus tremuloides*, DeBorgia. *Fomes leucophaeus* Mont., the typical American form with a pale or white hard crust, is very abundant and has been collected on *Populus trichocarpa* and *P. tremuloides* throughout the range

of these trees in the state. The fungus also occurs on *Populus angustifolia*, Sioux National Forest, *P. deltoides*, Missoula, *P. balsamifera*, Bearmouth, *Betula occidentalis*, Libby, *Abies grandis*, Taft, *Pseudotsuga taxifolia*, Darby. The fungus is frequently found on dead roots of living deciduous trees.

Fomes conchatus Pers. on *Betula occidentalis*, Somers, *Salix bebbiana*, Florence, *Populus trichocarpa*, Troy. The form *Fomes salicinus* Bull. is occasionally found on *Salix* species.

Fomes ellisianus Anderson on living *Shepherdia*, Sioux National Forest. Common.

Fomes everhartii Ellis on living trunks of *Populus trichocarpa*, Troy.

Fomes fomentarius Linn. on *Betula occidentalis*, Troy, *Populus trichocarpa*, Neihart, *P. tremuloides*, Missoula. The form sometimes distinguished as *Fomes lobatus* Schw. occurs.

Fomes fraxinophilus Peck on *Fraxinus* sp., Sioux National Forest, on roots of living trees.

Fomes igniarius Linn. on *Betula occidentalis*, Missoula, *Alnus tenuifolia*, Missoula, *Prunus emarginata*, Somers, *P. demissa*, Bearmouth, *Acer glabrum*, Libby, *Populus tremuloides*, Monarch, *P. angustifolia*, Glendive, *P. trichocarpa*, Troy. The fungus causes a serious heart rot in the living tree and continues alive after the death of the host.¹⁰ The form "*nigricans*" is occasionally found.

Fomes juniperinus Schrenk. One specimen on living *Juniperus communis* may be referred to this species, Madison National Forest.

Fomes officinalis Fr. on *Larix occidentalis*, Kalispell and Missoula, *Pinus ponderosa*, Missoula and Evaro, *Pseudotsuga taxifolia*, Missoula. Causes a serious heart rot in the living tree and remains living after the death of the host, often fruiting in Poria-like form.

Fomes pini (Brot.) Lloyd on *Pinus ponderosa*, Neihart, *P. contorta*, Anaconda, *P. flexilis*, Anaconda, *P. albicatus*, Hamilton, *P. monticola*, Troy, *Picea Engelmanni*, Saltese, *Abies grandis*, Troy, *A. lasiocarpa*, Libby, *Larix occidentalis*, Missoula, *Pseudotsuga taxifolia*, Missoula, *Tsuga heterophylla*, Troy, *Thuja plicata*, Libby. *F. pini* causes a serious heart rot in the living tree and remains living after the death of the host. *Trametes Abietis* Karst. and *T. piceina* Peck are thin forms and from observations of the same plants during different seasons have perennial sporophores which may be stratified at point of attachment and should be here referred. All forms show great variation in pores, produce the same rot, and may be resupinate. *F. pini* sometimes occurs in entirely resupinate form. In this region the thin forms are not any more common on spruce than on other conifers. A plant repeatedly collected in Montana and throughout the Northwest and which occurs only on *Crataegus* has been reported as belonging in this group.¹¹ Recently specimens were sent to Lloyd who transmitted the following note to the

¹⁰ Hartig. Zersetzungerscheinungen p. 115. 1878.

Spaulding. Bureau of Plant Industry Bul. 147: 31. 1909; and in Science 28: 816. 1908.

¹¹ Weir, J. R. Notes on Wood-destroying Fungi Which Grow on Both Coniferous and Deciduous Trees.—I. Phytopathology 4: 272. 1914. writer: "*Trametes piceana*. On *Crataegus*. This species is common on

acerous wood but unrecorded on frondose. Exactly same as acerous form (form with small pores). Spores globose, 5-6 mic, hyaline, transparent, often guttulate. Setae are rare but large and same as those on acerous wood. (Cfr. Syn. Fomes, p. 277.)"

Fomes pinicola Swartz. on *Larix occidentalis*, Missoula, *L. Lyallii*, Hamilton, *Tsuga heterophylla*, Troy, *Picea Engelmanni*, Libby, *Pseudotsuga taxifolia*, Missoula, *Abies grandis*, Darby, *A. lasiocarpa*, Libby, *Pinus ponderosa*, Evaro, *P. contorta*, Anaconda, *P. albicaulis*, Hamilton, *P. flexilis*, Anaconda, *P. monticola*, Troy, *Betula occidentalis*, Troy, *Alnus tenuifolia*, Libby. Occasionally causes a heart rot in the living tree, ordinarily on fallen timber.

Fomes pomaceus Pers. on *Prunus Virginiana*, Troy, *P. emarginata*, Somers, on domestic plums, Missoula. Causes a decay of the heartwood in living trees. Remains living after the death of the host.

Fomes putearius Weir on *Larix occidentalis*, Troy, *Picea Engelmanni*, Libby. A resupinate form also occurs.

Fomes ribis Schum. on living *Lonicera involucrata*, Libby, *Symphoricarpos racemosus*, Billings. The writer's specimens of *Fomes Loniceræ* Weinm. and *F. Evonymi* Kalch. collected in Europe can not be distinguished in their microscopic details from *F. ribis* and should be here referred. Brenckle reports *F. ribis* as common on *Symphoricarpos* in the Dakotas.

Fomes roseus A. & S. on *Pseudotsuga taxifolia*, Darby, *Pinus contorta*, Boulder, *Picea Engelmanni*, Libby.

Fomes scutellatus Schw. on *Amelanchier alnifolia*, Libby.

TRAMETES

Trametes carnea Nees on *Pseudotsuga taxifolia*, Missoula, *Tsuga heterophylla*, Troy and Boulder, *Pinus ponderosa*, Ashland. Sporophores sometimes remain living for more than one season and are then indistinctly stratified but are quite distinct from *Fomes roseus*. A specimen on *Pinus monticola*, Troy, has a surface of whitish appressed fibrils. This form has been distinguished by the name *Trametes arctica* Berk. (See Lloyd's Synopsis of the Genus *Fomes*, page 225.)

Trametes hispida Bagl. on *Populus* and *Salix* spp. throughout the state. These specimens are in every way identical with material collected by the writer on *Fraxinus* in Bavaria. A form with small pores common in Europe is also occasionally found here.

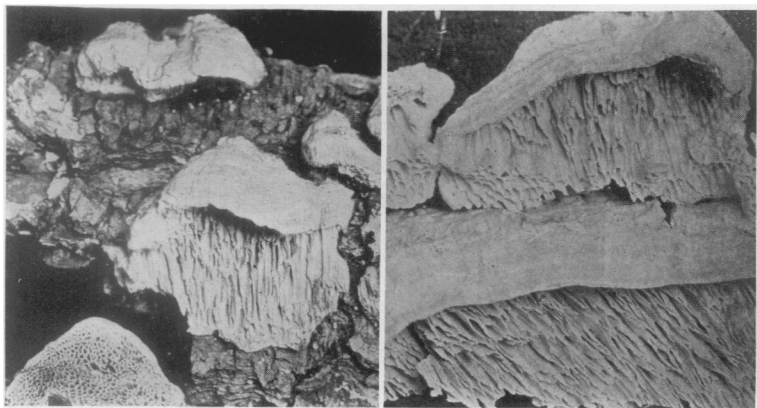
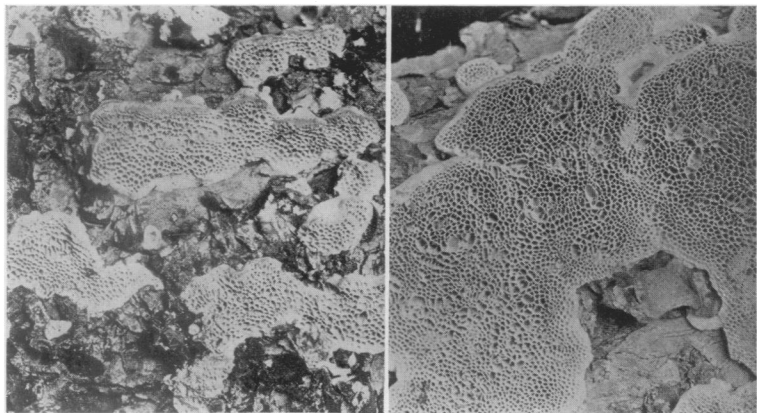
Trametes lacerata Lloyd on *Alnus tenuifolia*, Evaro, fide Lloyd.

Trametes malicola B. & C. on *Populus tremuloides*, Sioux National Forest.

Trametes mollis Fr. on *Betula occidentalis*, Bearmouth, *Populus trichocarpa*, Libby.

Trametes pargamensis Lloyd. Mr. Lloyd named this species from material collected by the writer on living *Populus trichocarpa*, Darby. It "is a thick, rigid plant, but in other features, context, violaceous pores, etc., is the same species" as *Polystictus pargamensis*. (See Lloyd Letter.)

Trametes protracta Fr. on *Pinus monticola*, Libby, *P. contorta*, DeBorgia. This is a good species and should not be considered a poroid form of *Lenzites saepiarum*. In its typical form the species is much larger than the latter, sometimes 3 to 4 by 6 inches, smooth above and is usually found on pines.



LENZITES HETEROMORPHA Fr.

Trametes sepium Berk. on *Acer negundo*, Sioux National Forest. A plant is occasionally collected from old yellow pine stumps which is in every way typical and should be referred here.

Trametes serialis Fr. on *Pinus ponderosa*, Boulder, *P. contorta*, Anaconda, *P. monticola*, Troy.

Trametes suaveoleus Fr. on *Populus trichocarpa*, Missoula, *P. tremuloides*, Monarch, and on various *Salix* spp. throughout the state. The species sometimes causes a heart rot in living trees.

Trametes tenuis Karst. (*T. setosus* Weir), on *Pinus monticola*, Troy, *P. ponderosa*, Darby, *Larix occidentalis*, Evaro.

Trametes variiformis Peck on *Larix occidentalis*, Darby.

DAEDALEA

Daedalea unicolor Fr. on deciduous trees, common throughout the state. A light colored form of this species is designated by Lloyd as *D. ochracea*. Hennings recognized an Irpex-like form as *D. unicolor* var. *hydnoidea*. Both forms are common on birch.

Daedalea confragosa Fr. on *Salix* spp., Missoula, and Neihart, *Populus tremuloides*, Libby. All the usual variations occur.

LENZITES

Lenzites saepiaria Fr. on all species of conifers and occasionally on wood of deciduous trees, rarely a wound parasite. Common throughout the state.

Lenzites betulina Fr. on dead wood of *Betula occidentalis*, Libby.

Lenzites heteromorpha Fr. on *Pseudotsuga taxifolia*, Evaro, *Abies grandis*, Libby, *Tsuga heterophylla*, Troy, *Pinus monticola*, Heron. These specimens are probably only in part correctly referred. The material shows great variation. The plant is coarse, white with white context and the hymenium may be either lamellate, daedaloid, or with large angular pores 0.4 to 1 cm. deep and 2 to 5 mm. broad. The spores are hyaline 8-11 by 3-4 μ . This plant or a closely related form seems to have been named *Trametes hexagoniformis* by Murrill. A specimen sent to Mr. Lloyd has been so referred. The accompanying photographs (pl. 6) show quite plainly the form variations of this plant on *Pseudotsuga taxifolia*.

Lenzites trabea Fr. on *Betula occidentalis*, Haugan, *Prunus demissa*, Libby, *Pinus contorta*, Boulder.

FAVOLUS

Favolus europaeus Fr. on dead branch of *Fraxinus viridis*, Glendive; small weathered specimen but typical except color.

OFFICE OF INVESTIGATIONS IN FOREST PATHOLOGY,
BUREAU OF PLANT INDUSTRY,
MISSOULA, MONTANA.